

USSR

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BASOV, N. G., GROMOV, V. V., KOSHELEV, Ye. L., MARKIN, Ye. P., ORAYEVSKIY, A. N.,
SHAPOVALOVA, D. S., SHCHEGLOV, V. A., Physics Institute imeni P. N. Lebedev,
Academy of Sciences, USSR

"A Continuous-Action DF — CO₂ Chemical Laser"

Moscow, Pis'ma v (Letters to the) Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, Vol 13, No 9, 5 May 1971, pp 496-498

Abstract: A report is given on obtaining continuous laser emission in subsonic
gas streams. Generation takes place due to CO₂ molecules excited by means of
the transmission of energy from oscillatorily excited DF* molecules obtained in
the process of a chain reaction of deuterium with fluorine with purely chemical
initiation. 2 figures. 2 bibliographic entries.

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BASOV, N. G., ZAVOROTNYI, S. I., MARKIN, YE. P., NIKITIN, A. I., and
ORAYEVSKIY, A. N., Physics Institute imeni P. N. Lebedev, Academy of Sciences
USSR

"High-Pressure, Pulsed Chemical Laser Using a $D_2+F_2+CO_2$ Mixture"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 15,
No 3, 5 Feb 72, pp 135-137

Abstract: The idea of obtaining an inverted population by energy transfer from "hot" molecules obtained during a chemical reaction to "cold" molecules was first suggested by the authors with application to chemical lasers. The method of introducing a polyatomic CO_2 molecule into a D_2+F_2 mixture enabled the authors to increase the chemical efficiency and output energy of a pulsed chemical laser approximately 10-fold, and the successful completion of experiments with the mixture at low pressures made it possible for them to undertake experiments at higher reactant pressures. The introduction of CO_2 molecules made it possible to put together a working mixture in which the partial pressures of deuterium and commercially pure fluorine exceeded the

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BASOV, N. G., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 15, No 3, 5 Feb 72, pp 135-137

second chain flammability limit of a pure stoichiometric D_2+F_2 mixture. The typical partial pressure ratio of the principal components of the gas mixture -- fluorine, deuterium, carbon dioxide, and helium -- was 1:1 4:11 [sic] respectively, and the total pressure varied within several hundred torr. Experiments were staged in a stainless steel reactor vessel. Initiation of the reaction was effected by the radiation of a linear flash lamp with a brightness temperature of 20,000-25,000° K. It was found that the rate of formation of fluorine atoms during dissociation of fluorine molecules under the action of the radiation of the source being used is insufficient in most cases for the development of oscillation. Therefore, to improve reaction initiation conditions, a readily dissociating fluorine-containing component (molybdenum hexafluoride or other fluorine compound) was added to the mixture. The MoF_6 pressure (several torr) was chosen so that the characteristic chemical reaction time should be about 1-2 microseconds. On a wavelength of about 10.6 microns oscillation as a rule, appears 5 microseconds after the start of the light pulse and lasts 7-10 microseconds. Spikes lasting about 1 microsecond

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BASOV, N. G., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 15, No 3, 5 Feb 72, pp 135-137

are sometimes observed at the top of the pulse. The energy in the radiation pulse varies from 5 to 15 j according to the composition of the gas mixture.

The authors thank A. V. PANKRATOV, V. S. ZUYEV, V. L. TAL'ROZA, P. G. GRIGOR'YEV, L. V. KULAKOV, V. T. GALOCHKIN, V. V. GROMOV, B. I. BOROVICH, and G. K. VASIL'YEV for their assistance in the work.

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USSR

UDC 621.373:530.145.6

BASOV, N. G., IGOSHIN, V. I., MARKIN, Ye. P., ORAYEVSKIY, A. N.

"Dynamics of Chemical Lasers. (A Survey)"

V sb. Kvant. elektronika (Quantum Electronics--collection of works),
No 2, Moscow, 1971, pp 3-24 (from RZh-Radiotekhnika, No 7, Jul 71,
Abstract No 7D132)

Translation: The paper is a survey of chemical methods of laser excitation. An analysis is made of the possibility of obtaining an inverse population of the vibration levels of molecules in the case of self-sustained chemical processes (chain and branched-chain reactions, heat explosion). Special attention is given to problems of the theory of vibrational relaxation as applied to chemical lasers. The results of an experimental study of a number of lasers with chemical pumping are presented. Some methods of initiating reaction in large volumes of the reagent are qualitatively discussed. Chemical lasers are listed (as of 1 August 1970) with an index of working characteristics. Six illustrations, three tables, bibliography of ninety-nine titles. Resumé.

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USSR

UDC 621.378.33

BASOV, N. G., IGOSHIN, V. I., MARKIN, Ye. P., ORAYEVSKIY, A. N.

"Dynamics of Chemical Lasers"

Moscow, Kvantovaya Elektronika, No 2, 1971, pp 3-24

Abstract: The article is a survey of chemical methods of laser excitation. An analysis is made of the possibility of inverting populations of the vibrational levels of molecules in the case of self-sustaining chemical processes (chain and branched-chain reactions, thermal explosion). Special consideration is given to problems in the theory of vibrational relaxation as applied to chemical lasers. The results of experimental studies of a number of laser systems with chemical pumping are presented. Some methods of initiating a reaction in large volumes of reactant are discussed on the qualitative level. A list of chemical lasers is presented (as of 1 Aug 70) with indication of their operating characteristics. Six illustrations, three tables, and a bibliography of 99 titles.

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USSR

UDC: 621.373.530.145.6

BASOV, N. G., GALOCHKIN, V. T., KULAKOV, L. V., MARKIN, Ye. P., NIKITIN, A. I., ORAYEVSKIY, A. N.

"A Chemical Laser Based on the Mixture $D_2+F_2+CO_2$ "

Kratk. soobshch. po fiz. (Brief Reports on Physics), 1970, No 8, pp 10-14
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12D226)

Translation: To produce emission on the mixture $D_2+F_2+CO_2$, the authors used the idea of creating a population inversion by transmitting excitation from a "hot" to a "cold" reaction product. With the ratio of D_2 and F_2 pressures equal to 0.9:0.9 mm Hg, the half-width emission pulse duration is ~3 μ sec. The addition of 0.1 mm Hg of CO_2 to this mixture cuts the pulse duration in half, and when the pressure is increased to 0.3 mm Hg, emission is cut off on a wavelength of 4 μ , but emission appears on a wave of 10.6 μ . As the pressure rises further, the emission intensity of the pulse increases, reaching a maximum in the range of 1-2 mm Hg. The pulse duration of emission on activated CO_2 molecules is 400 μ sec, i. e. it corresponds to the time of existence of chemiluminescence of excited DF^* molecules. The energy in the emission pulse on CO_2 molecules increases in comparison with the emission energy of DF^* by a factor of 10, which corresponds to an increase in the quantum yield by a factor of 25. A. K.

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Luminescence

USSR

UDC 541.127:541.14+541.515

VOL'KENSHTEYN, F. F., MARKIN, Yu. A., SIVOV, Yu. A., and STYROV, V. V.,
Institute of Physical Chemistry, Academy of Sciences USSR, and Tomsk
Polytechnic Institute

"Theory of Radical-Recombination Luminescence. 3. Kinetics of Radical-
Recombination Luminescence"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 8, Aug 71,
pp 1664-1672

Abstract: The kinetics of the build-up of radical-recombination luminescence (RRL) were first studied by V. A. SOKOLOV and A. N. GORBAN'. The present article is a continuation of these studies. Experiments were performed on a vacuum device with a mercury diffusion pump, permitting a vacuum of 10^{-5} torr. RRL was excited by atomic hydrogen obtained by means of a high-frequency discharge. Kinetic curves were plotted in the 300-550°K range at various hydrogen pressures. Powdered phosphors were applied from an alcohol suspension to glass substrates. It was found that the character of the kinetic isotherms differs for a very clean surface and one that is insufficiently clear. The kinetic curve rises in the former case, falls in the latter case due to the fact that the surface holds residues of pre-chemisorbed hydrogen in the

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VOL'KENSHTEYN, F. F., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 8, Aug 71, pp 1664-1672

charged state, the hydrogen being gradually removed from the surface as a result of the recombination reaction. After RRL halts, the content of the charged form of chemisorption on the surface first rises, then begins to decline as a result of desorption. The initial ascending branch of the curve is due to the fact that the system approaches steady-state electronic equilibrium in the absence of recombinations. In the case where the discharge is interrupted, then is on again after a certain pause, the "memory effect" is observed. The character of the RRL kinetics here depends on the length of the pause, due to the fact that the quantity of chemisorbed hydrogen remaining on the surface after the pause varies according to the pause length.

The authors thank V. A. SOKOLOV for discussing the results of the work and for his guidance in the experimental portion.

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USSR

UDC 535.373.2

M
MARKIN, Yu. A., STYKOV, V. V., and KHORUZHIY, V. D., Tomsk Polytechnic
Institute imeni S. M. Kirov

"Effect of Surface on Radical Recombination Luminescence Spectra"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 7, 1970,
pp 132-133

Abstract: A study of the effect of the surface on the radical recombination luminescence (RRL) spectra of zinc sulfide phosphors indicates the following:

1. The halfwidth of the emission bands in the case of RRL is, as a rule, greater than in the case of photoluminescence.
2. The halfwidth of RRL and photoluminescence spectra varies differently with temperature, this dependence being more strongly pronounced in RRL.

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MARKIN, Yu. A., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy --
Fizika, No 7, 1970, pp 132-133

3. There is a shift in RRL emission band maximums with respect to the same bands in photoexcitation.

4. The RRL spectrum is sensitive to the temperature of the specimen.

5. The magnitude of RRL spectra displacement relative to photoluminescence depends on the type of activator.

The authors' laboratory is undertaking experiments to study the role of exciton excitation in RRL at low temperatures, especially in the case of molecular crystals.

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USSR

UDC 621.791:669.01.825
Paton Electric Welding Institute

MARKIN, Yu. V., FRUMIN, I. I., Ye. O. Paton Electric Welding Institute
"Heat-Resistant Alloys for Surfacing Internal Combustion Engine Valve Faces"
Kiev, Avtomaticheskaya Svarka, No 11, Nov 72, pp 49-51.

Abstract: This work reports on the development of a sealing surface of dense rolled metal for internal combustion engine exhaust valves, with the surface of the valve face produced not by ordinary surfacing, but rather by welding of a ring of heat-resistant deformable alloy to the valve. A group of heat-resistant dispersion-hardened nickel alloys was studied for this use. Alloy EI437B could probably be used for valves in lightly-loaded engines; for valves operating at 800°C, alloy VZh101 is most suitable. Valves reinforced with EI437B alloy operated 270 hours in a "Moskvich-408" engine, as opposed to 21-72 hours life for standard production valves. Motorcycle valves with VZh101 alloy lasted almost twice as long as series-produced valves made of type EP303 steel.

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UNCLASSIFIED

PROCESSING DATE--30OCT70

REACTION OF SODIO ACETOACETIC ESTER WITH TRANS,2,BUTENE OXIDE AND
OF SODIUM BENZOYLACETIC ESTER WITH PROPYLENE OXIDE AND TRANS,2,BUTENE
AUTHOR--(04)--TEMNIKOVA, T.I., MARKINA, G.V., BORODAVKO, V.A., YASKINA, N.I.

COUNTRY OF INFO--USSR

SOURCE--Z.I. ORG. KHIM. 1970, 6(4), 739-43

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LACTONE, IR SPECTRUM, MAGNETIC RESONANCE, ORGANOSODIUM
COMPOUND, ACETATE, ORGANIC OXIDE, MOLECULAR STRUCTURE

CENTRL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--2000/1953

CIRC ACCESSION NO--AP0125542

UNCLASSIFIED

STEP NO--UR/0366/70/006/004/0739/0743

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125542

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TITLE REACTIONS GAVE

ALPHA,ACETYL,BETA,GAMMA,DIMETHYL,GAMMA,

BUTYROLACTONE,ALPHA,BENZOYL,GAMMA,METHYL,GAMMA,BUTYROLACTONE (I), AND

ALPHA,BENZOYL,BETA,GAMMA,DIMETHYL,GAMMA,BUTYROLACTONE. THE STRUCTURES

OF THESE COMPS. WERE DETD. BY IR AND PMR SPECTROSCOPY. THE

DECARBOXYLATION OF I GAVE KNOWN MECH(OH)CH SUB2 CH SUB2 COPH. THESE

LACTONES CONTAIN CIS-H ATOMS IN BETA AND GAMMA POSITIONS.

FACILITY: LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 621.377.622.322.5.002.2(088.8)(47)

SAVEL'YEV, B. I., MARINGULOV, K. A., and VASIL'YEV, P. P.

"A Method of Manufacturing Phototemplates for Multilayer Printed Thin-Film Circuit Boards"

USSR Author's Certificate No 280594, Filed 7 Oct 68, Published 17 Nov 70
(from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B104 P)

Translation: A method of manufacturing phototemplates for multilayer printed thin-film circuit boards is suggested. It is based on making the masters from a set of flat mock-ups of parts and contact areas, which are interconnected by tracing elements covered with a sticky compound that simulates printed conductors. In order to simplify the process of manufacturing phototemplates, the masters are made by direct and mirror arrangement of the press. Two circular conductors of different colors are arranged in parallel and used as tracing elements; one of them has a diameter equal to the width of a printed conductor, while the other has a diameter equal to the minimum clearance between neighboring printed conductors. Alignment of contact areas in the masters of the current-carrying layers (starting with the second layer) is effected by a pinhole through the center of the contact
1/2

USSR

SAVEL'YEV, B. I., et al., USSR Author's Certificate No 280594, Filed 7 Oct 68, Published 17 Nov 70 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B104 P)

area of the first current-carrying layer. In the masters of the insulating layers there is an opening whose diameter is equal to the diameter of the openings in the printed circuit board.

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USSR

UDC 681.32.001

STAROS, F. G., and MARINGULOV, K. A.

"Electric Contact Set"

USSR Author's Certificate No 270038, Filed 20/11/67, Published 13/08/70
(Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, 1971, Abstract No 5B156P)

Translation: This contact set is designed to connect micromodules, assemblies, and units in computers. Electric contact sets are known which operate according to the principle of multiple mechanical contacting of each rod by inserting into the jack a coil spring with an oval cross section. The diameter of the rod is somewhat greater than the smallest diameter of the oval, providing 2 contact points for each turn of the spring. The contact set suggested differs as follows: In addition to the multiple mechanical contact, the jack contains an element allowing an additional soldered contact for each contact pair. A device is introduced which deforms the contact spring when the plugs are inserted and removed. The contact coil spring (oval in cross section) contacts the plug through spaces in the metal cylinder of the jack. This provides the following advantages: the reliability of the contact set is increased by the additional soldering of the contact pair;

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STAROS, F. G., and MARINGULOV, K. A., USSR Author's Certificate No 270038, Filed 20/11/67, Published 13/08/70 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, 1971, Abstract No 5B156P)

the deforming device eliminates wear of the coatings on the springs and plugs, which increases the stability of the contact resistance; the soldering is removed from the contacts without drawing off the solder; the spacing of the contact pairs is reduced, as is required for micro-miniaturized structures, since the contact spring is placed in the area occupied by the walls of the jack cylinder: i.e., in slits. 10 figs.

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USSR

UDC 621.382.2

CHASECHIN, S. P., SAF'YAN, T. L., BARYSHEV, N. S., AVER'YANOV,
I. S., and MARKINA, N. P.

" $Pb_{1-x}Sn_x$ Se Monocrystalline Photodiodes"

Leningrad, Fizika i tekhnika poluprovodnikov, vol. 5, No. 8, 1971,
p 1633

Abstract: The Pb-Sn-Se combination has promise as an infrared sensor in a broad range of wavelengths. This brief communication shows that annealing the crystals of this combination is unnecessary to obtain the photosensitivity in the p-n junction formed by the crystals since there is always a region of low vacancy concentration when the junction is obtained by deviating from the stoichiometric state. The authors describe the method they have developed for preparing $Pb_{0.95}Sn_{0.05}Se$ diodes of the p-type with a carrier concentration of 10^{19} per cubic centimeter. A curve of the spectral distribution for the photosensitivity of such diodes at the temperature of liquid nitrogen is given. The curve shows a maximum at a wavelength of about 10 microns.

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USSR

UDC: 681.3:51

AYLAMAZYAN, A. K., BELOTELOV, V. P., DOLGOPOLOV, V. V., KRAVTSOV, V. G., LOZA, T. M., MARKINA, N. V., KHAKHIN, M. D.

"A Device for Computing Aerodynamic Parameters"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 23, 1970, Author's Certificate No 276528, Filed 28 May 69

Abstract: This Author's Certificate introduces a device for computing aerodynamic parameters such as altitude, velocity, and Mach number. The unit contains converters of primary information to binary code which are connected through a shift register and adder to the input of an arithmetic device. Also included in the computer are a memory unit, decoder, pulse generator, control device, and recording unit. As a distinguishing feature of the patent, the electrical circuit is simplified and the overall dimensions are reduced by connecting the most significant digital places of one of the registers in the arithmetic device to the least significant digital places of the address section of the command register in the control unit through diodes controlled by the decoder and the pulse generator. The most significant digital places of the address section and the code section of the command register in the control device are connected to the memory unit.

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USSR

MARKINA, V. V., DREMOVA, V. P., and KAMENNOV, N. A.

"Prolongator of the Repellants From the Group of N,N-Substituted Alkylamides of Organic Acids"

USSR Author's certificate No 353727, filed 15 Feb 71, published 15 Nov 72 (from RZh-Khimiya, No 21, Nov 73, Abstract No 21N572P)

Translation: Complex cellulose esters such as acetopropionates and acetobutyrate have been proposed as prolongators of the repellants of the group of N,N-substituted alkylamides of organic acids. The duration of the activity of a 40% DETA cream and of a 30% cream of a carboxide on an oil base with the mentioned prolongators is 5-8 hrs in the north and 6-10 hrs in the south.

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USSR

UDC 632.95

VASHKOV, V. I., DEDOV, V. S., DREMOVA, V. P., SMIRNOVA, S. N., OSIPYAN, V. T.,
MASLIY, L. K., KOCHANOVA, A. P., and MARKINA, V. V.

"Entomological and Toxicological Characteristics of a New Repellent --
Carboxide"

Tr. VNII dezinfektsii i steriliz. (Works of All-Union Scientific Research
Institute of Disinfection and Sterilization), 1971, vyp. 21, Vol 2, pp 30-37
(from RZh-Khimiya, No 14, 25 Jul 72, Abstract No 14N465 by T. A. Belyayeva)

Translation: Carboxide is an effective repellent for mosquitoes, midges, and
some species of horseflies and mites. As creams and ointments are made,
protective film-forming substances must be put in since carboxide is absorb-
able through the skin. Refined carboxide, when used in its various forms
(ointment, cream etc.), causes no lesions on exposed areas of the body and has
no side effect on the human organism. Use of unrefined (industrial) carboxide
to make various forms of the repellent can induce skin irritation.

1/1

1/2 010 UNCLASSIFIED PROCESSING DATE--23JUL70
TITLE--DYNAMICS OF REMOVAL OF DIETHYLTOLUAMIDE FROM TREATED SKIN -U-

AUTHOR--(03)-MARKINA, V.V., DREMOVA, V.P., KAE MNNOV, N.A.

COUNTRY OF INFO--USSR

SOURCE--MASLO ZHIR. PROM. 1970, 36(2), 30-2

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--INSECT REPELLENT, BENZENE DERIVATIVE, AMIDE, SKIN TEST,
CELLULOSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0698

STEP NO--UR/9085/70/036/002/0030/0032

CIRC ACCESSION NO--AP0119605

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119605

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EVAPN. OF DIETHYLTOLUAMIDE (I), USED AS AN INSECT REPELLENT, FROM SKIN TREATED WITH COSMETIC PREPNS. CONTG. I WAS EXAMD. THE ADDN. OF FILM FORMING AGENTS OR STABILIZERS, E.G., HYDROXYPROPYL CELLULOSE, SILICONE FLUID (II), AND ET CELLULOSE (III) INCREASED THE RESIDENCE TIME OF I ON THE SKIN. THE BEST RESULTS WERE OBTAINED WITH EMULSION CREAMS CONTG. 20PERCENT I AND II AS FILM FORMING AGENT AND WITH SOAP CREAMS WITH 40PERCENT I AND III AS STABILIZER (25PERCENT I EVAPD. AFTER 6 HR). PHYS. ACTIVITY OF THE INVESTIGATED SUBJECTS INCREASED THE RATE OF I EVAPN. FROM SKIN. GNATS WERE REPELLED WITH A MIN. CONCN. OF 0.14 MG I-1 CM PRIME2 OF SKIN, WHILE FOR MIDGES THE MIN. CONCN. WAS 1.5 MG. FACILITY: MOSK. MYL'NO KOSMET. FABR. SVOBODA. MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr.:

AP0031217

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 1, pp 34-36

DETERMINATION OF LIPIDS AND THE LIPASE ACTIVITY LEVEL IN THE
EPIPHYSIS OF ADRENALECTOMIZED RATS KEPT ON A DIET CONTAINING
DIFFERENT AMOUNTS OF SODIUM

V. V. Markina

Institute of Experimental Endocrinology and Hormonal Chemistry of the AMS of the
USSR, Moscow

Adrenalectomy produced in rats a clearcut fall of lipids in the epiphysis and a simultaneous increase of the lipase activity. Salt free diet led to a still greater decline of lipids and to a somewhat reduced lipase activity. Sodium loads caused the amount of pineal lipids to go up without any substantial changes in the lipase activity.

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REEL/FRAME

19691266

I/2 006 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--REDUCTION IN THE CRITICAL MICELLE CONCENTRATION IN AQUEOUS SOAP
SOLUTIONS UNDER THE INFLUENCE OF DISSOLVED HYDROCARBONS AT VARIOUS
AUTHOR--(03)--MARKINA, Z.N., KOSTOVA, N.Z., REBINDER, P.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(1), 141-3

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SOAP, SOLUBILITY, AQUEOUS SOLUTION, BENZENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1997/1128

STEP NO--UR/0020/70/191/001/0141/0143

CIRC ACCESSION NO--AT0119982

UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0119982

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. THE CRIT. CONCN. OF MICELLE FORMATION IS REPORTED FOR NA SALTS OF C SUB6-14 ALIPHATIC ACIDS IN SYSTEMS CONTG. C SUB6 H SUB6, PHET, AND C SUB8 H SUB18 BESIDES THE AQ. PHASES. INTRODUCTION OF TRULY DISSOLVED HYDROCARBONS INTO THE AQ. PHASE PROMOTES MICELLE FORMATION AND DECREASES THE CRIT. CONCN. THIS EFFECT DECREASES WITH INCREASING CHAIN LENGTH OF THE SOAP USED AND WITH REDN. OF SOLY. OF THE HYDROCARBON IN PURE H SUB2 O AND WITH DECREASING TEMP. THE SIGNIFICANCE OF THESE FACTORS IS DISCUSSED AT LENGTH ON THE BASIS OF THE STATISTICAL THERMODYNAMIC MODEL OF MICELLE FORMATION. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--020070
TITLE--EFFECT OF TEMPERATURE AND SOLUBILIZATION OF HYDROCARBONS ON THE
MEAN MICELLAR WEIGHTS IN AQUEOUS SODIUM OLEATE SOLUTIONS -J-
AUTHOR--(03)-CHIRNIKOVA, A.V., MACKINA, Z.N., REBINDER, P.A.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 288-292

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMAL EFFECT, ORGANOSODIUM COMPOUND, OLEIC ACID,
HYDROCARBON, SOLUBILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1492/1549

STEP NO--08/0049/70/032/002/0288/0292

CIRC ACCESSION NO--AP0112543

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0112543

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NEPHELOMETRIC STUDIES HAVE BEEN CARRIED OUT IN AQUEOUS SODIUM OLEATE SOLUTIONS IN THE CONCENTRATION RANGE 1.25-15 G-100 ML OVER THE TEMPERATURE RANGE 20-60DEGREES. AT A DEFINITE CONCENTRATION OF SOAP SOLUTION SPHERICAL MICELLES CHANGE INTO LAMELLAR. WITH RISING TEMPERATURE, LAMELLAR MICELLES BREAK DOWN TO SPHERICAL AND THE AGGREGATION DEGREE OF SPHERICAL MICELLES SOMEWHAT DIMINISHES. SOLUBILIZATION OF HYDROCARBONS BRINGS ABOUT BREAKING UP OF LAMELLAR MICELLES INTO SPHEROIDAL AND REORGANIZATION OF SPHERICAL MICELLES WITH INCREASE OF THEIR AGGREGATION DEGREE.

UNCLASSIFIED

USSR

UDC 631.547:633.1

MARKITANTOVA, A. V., Northwest Scientific Research Institute of Agriculture

"Response of Various Types of Grain Crops to the Application of TUR Compound"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 10 (84), Oct 70, pp 62-64

Abstract: The article is a report on tests conducted in 1967 and 1968 in the Gatchinskiy Rayon of the Leningradskaya Oblast to determine the response of various types of grain crops to TUR retardant. Various strains of rye, wheat and barley were tested. It was found that application of TUR under conditions of high soil fertility results in complete prevention of lodging in winter wheat, rye and barley. Crop stability was improved by reduction of stalk height, and thickening of the walls in the lower part of the stalk. The crops in treated plots formed larger grains and more productive heads, with a resultant increase in the harvest. The greatest increase in grain harvest was obtained with Vyatka-2 rye and Tormoychanka wheat, which are susceptible to lodging. Treatment of Priyekul'skaya-481 wheat, which has a strong stalk, did not improve the harvest, and in fact resulted in deterioration of the grain quality. 1/1

USSR

UDC 535.376:621.382

GRIKOVSKIY, V.P., KONONENKO, V.K., MARKITSKIY, YU.V., SAMOYLYUKOVICH, V.A.

"Ways Of Increasing The Efficiency Of Semiconductor Light Sources"

V sb. Elektroluminestsentsiya tverd. tel. (Electroluminescence Of Solid Bodies--Collection Of Works), Kiev, "Nauk.dumka," 1971, pp 107-113 (from RZh--Elektronika i yeye primeneniye, No 11, Nov 1971, Abstract No 11B371).

Translation: The dependence is studied of the indicatrix of radiation of electroluminescent diodes on their dimensions, form, and intensity of excitation. The waveguide regions in which radiative recombinations take place are discussed. Formulas are obtained which take account of all the parameters of the diode for radiation flow, limiting efficiency, optimum effective losses, and the optimum current in sources of coherent light. At 77° K in a regime of stimulated emission, 48-watt power was obtained experimentally with diffused gallium arsenide diodes, and an effectiveness of the p-n junction of 53 percent attained. 1 ill. 13 ref. Summary.

1/1

USSR

UDC 669.245'296'297.017.3:548.73

PET'KOV, V. V., MARKIV, V. YA., and GOESKIY, V. V.

"Compounds with an $MgCu_2$ -Type Structure in Zr-Ni and Hf-Ni Alloys"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 2, Mar-Apr 72, pp 188-192

Abstract: The Zr-Ni systems was investigated using seven alloys containing the following amounts of nickel (at.%): 64.8, 65.5, 66.7, 67.5, 68, and 69. The Zr-Ni alloys were made by electric-arc melting of a charge consisting of zirconium iodide (99.95%) and electrolytic nickel (99.99%). Hafnium with a purity of 99.93% was used to produce the HfNi₂ alloy. Heat treatment of the alloys consisted of a 200-hour anneal at 900°C followed by cold water quenching. Both cast and hardened alloys were studied by methods of x-ray diffraction, microstructural, local x-ray spectral, differential thermal, and calorimetric analyses.

In both systems, for compositions of ZrNi₂ and HfNi₂, compounds are formed with a structure of the type $MgCu_2$ with lattice constants equal to 6.925 and 6.906 Å, respectively. The compound ZrNi₂ forms according to a peritectic reaction at 1190°C while compounds Zr₂Ni₅ and HfNi₃ form at 1265 and 1575°C. Three figures, 3 tables, 10 bibliographic references.

1/1

- 25 -

USSR

UDC 669.296'25'3'71.018.1

MARKIV, V. Ya., and BURNASHOVA, V. V., Institute of Problems of Material Science, Academy of Sciences, UkrSSR, L'vov State University imeni I. Franko

"Study of the Zr-Cr-Al and Zr-Cu-Al Systems"

Kiev, Poroshkovaya Metallurgiya, No 12, Dec 70, pp 53-58

Abstract: The systems Zr-Cr-Al and Zr-Cu-Al were studied by X-ray diffraction and microstructural analysis. These systems differ from each other significantly in the nature of their interactions. In the system Zr-Cr-Al, the initial components interact without formation of ternary compounds. An isothermal cross section of the system Zr-Cr-Al at 800°C shows the formation of a solid solution of chromium in $ZrAl_2$ (up to about 54 at.%). In the system Zr-Cu-Al at 800°C, eight ternary phases take part in the phase equilibrium. In aluminum-rich alloys at 500°C, one more ternary phase is formed. The structure of the γ -phase was determined. This phase was determined to have tetragonal symmetry ($ThMn_{12}$ structure: $a = 8.50 \text{ \AA}$; $c = 5.11 \text{ \AA}$; $c/a = 0.60$). The crystal structure of the other phases was not determined.

1/1

- 2 -

nova, V. V.; KYADOV, V. K. (Inst. Fiziol. Materialovedeniya, Kiev, USSR). *Dopov. Akad. Nauk Ukr. RSR. Ser. A* 1970, 1, 68-72 (Ukrain). Microscopic and x-ray methods were used for the study of aluminum-rich phase of the Mo-Fe-Al system. The Mo-Fe-Al phase diagram was obtained from the investigation on 15 binary and 75 ternary systems. Isothermal sections of the Mo-Fe-Al diagram at 800 and 1050° are presented. Two ternary phases, N and S, were ascertained in the isothermal section at 1050°. $\text{MoFe}_{0.8}\text{Al}_{1.2}$ (N phase) is tetragonal with a 3.76 and c 8.43 Å and seems to be isotypic with TiAl_3 . The S phase with a compn. of 5 at. % Mo, 35 at. % Fe, and 60 at. % Al was not studied in detail. The N and S phases were stable at >800° and >1000-1050°, resp. Binary compds. of FeAl and FeAl_3 exist in equil. with Mo_3Al_8 in the isothermal section at 800°.

Frantisek Cejnar

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Acc. Nr:

AT0048306

Abstracting Service:
CHEMICAL ABST. 5-30

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Ref. Code:

4R0441

93846e Aluminum-rich phase of a phase diagram of the
molybdenum-iron-aluminum system. Markiv, V. Ya.; Burdakov,
V. V. Zh. Fiz. Khim. 1984, 60, 1, 1-4, 10 refs.

USSR

UDC 669.017.13.296.297.12.25.24

SVECHNIKOV, V. N., MARKIV, V. YA., and PET'KOV, V. V., Institute of Metal Physics, Academy of Sciences Ukr SSR and Kiev State University

"Interaction of Laves' Phases in $\text{Zr}\{\text{Fe,Co,Ni}\}_2$ - $\text{Hf}\{\text{Fe,Co,Ni}\}_2$ Systems"

Kiev, Metallofizika, No 40, 1972, pp 95-97

Abstract: The interaction of Laves' phases in $\text{Zr}\{\text{Fe,Co,Ni}\}_2$ - $\text{Hf}\{\text{Fe,Co,Ni}\}_2$ systems was investigated by methods of differential thermal, X-ray, and microstructural analyses. The system ZrFe_2 - HfFe_2 is a quasi-binary peritectic type. It is characterized by significant solubility of hafnium in the metallide ZrFe_2 (approximately 21 at.% at 1500°C and almost 18 at.% at 900°C); solubility of zirconium in HfFe_2 is insignificant. Compounds ZrCo_2 and HfCo_2 form a continuous series of solid solutions. In the Zr-Hf-Ni system at the section of 66.7 at.% Ni of the ternary compounds no Laves' phases were detected. 2 figures, 12 bibliographic references.

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USSR .

UDC 577.1:612.12.015

MURASHOV, B. F., MARKIZOVA, N. F., MITINA, A. P.

"Functional State of the Hypophysial-Adrenal System Under the Effect of Small Doses of Ionizing Radiation"

Sb. nauch. rabot. Voen.-med. fak. pri Kuybyshev. med. in-te
(Collected Scientific Works. Military Medicine Department,
Kuybyshev Medical Institute), 1971, No 3, pp 101-105 (from
RZh-Biologicheskaya Khimiya, No 21, Nov 71, Abstract No 21F1606)

Abstract: The authors studied some indices of the functional state of the hypophysial-adrenal system in 52 persons working under conditions of long-term exposure to small doses of x-rays (roentgenologists, x-ray technicians, petroleum well loggers, and also persons who have worked under conditions of constant exposure to phosphors for 5-10 years). It was found that the investigated group of people is characterized by a certain reduction of daily elimination of 17-ketosteroids and 17-hydroxysteroids in the urine, as well as a reduction in the effect of an ACTH injection on these indices. These changes were more pronounced in men than in women. No appreciable anomalies were observed in

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USSR

MURASHOV, B. F., et al, Sb. nauch. rabot. Voen.-med. fak. pri Kuybyshev. med. in-te, 1971, No 3, pp 101-105

the exchange of electrolytes in the contingent studied. According to the data of biological sampling (effect on concentration of ascorbic acid in the adrenal glands of a rat), the blood plasma of the studied group of people contains a high quantity of ACTH.

2/2

- 9 -

USSR

UDC 536.25

MARKMAN, G. S.

"Branching in the Problem of Time Periodic Convection"

V sb. Mat. analiz i yego pril. T. 4 (Mathematical Analysis and Its Applications. Vol. 4 — Collection of Works), Rostov-na-Donu, Rostov University, 1972, pp 62-70 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B844)

Translation: Convection in a horizontal layer of viscous incompressible fluid with three boundaries (the Rayleigh problem) is discussed. The equilibrium temperature gradient is independent of the vertical coordinate z and changes periodically with time according to the law $F_0(\psi) = 1 + k \sin \omega t$. For the case of large frequencies ω , it is shown with the aid of the Lyapunov-Schmidt method that as the Rayleigh number goes through a critical value there arises a pair of secondary periodic flows which are stable relative to perturbations of the periodicity and parity identical with them. Author's abstract.

1/1

USSR

MARKMAN, G. S., YUDOVICH, V. I.

"Conditions of Instability of Purely Rotary Periodic Flows of an Ideal Fluid"

Mat. Analiz i ego Pril. T. 3. [Mathematical Analysis and its Applications, Vol 3 -- Collection of Works], Rostov-na-Donu, Rostov University Press, 1971, pp 59-69, (Translated from Referativnyy Zhurnal, Mekhanika, No 10, 1972, Abstract No 10 B524, by V. Kh. Izakson).

Translation: Purely rotary flows of an ideal incompressible fluid between rotating cylinders are studied:

$$\Phi = \{0, \Phi_0(r, t), 0\}, \quad \Phi_0(r, t) = \int_0^T F(r, \tau) d\tau + \tau(r)$$

$F(r, \tau)$ is a T-periodic function of τ , satisfying the condition

$\int_0^T F(r, \tau) d\tau = 0$. $\tau(r)$ is an arbitrary function of r . The method of small oscillations is used to establish that for instability of these flows, it is sufficient that the conditions

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-USSR

MARKMAN, G. S., YUDOVICH, V. I., Mat. Analiz i ego Pril. T. 3., Rostov-na-Donu, Rostov University Press, 1971, pp 59-69.

be satisfied, where r_1 , r_2 are the radii of the cylinders.

2/2

31

USSR

UDC 621.47

MARKMAN, M. A., MARYCHEVA, G. P., and SIMANOVSKIY, L. I., Ail-Union Order of
~~Labor Red Banner~~ Scientific Institute of Current Sources

"Measurement of the Quality of Thermoelements and Batteries by Harman's Method"

Tashkent, Geliotekhnika, No 6, 1970, pp 13-17

Abstract: The application of the method proposed by T. C. Harman for measuring the quality Z of thermoelectric materials to thermocells and battery is discussed. It is shown that the error resulting from direct application of this method to thermocells and batteries may be eliminated by equalization of the temperature gradient between the p-arm and the n-arm of the thermocell. 2 figures, 1 table, 5 bibliographic entries.

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1/2 033 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--COPOLYMERIZATION OF ,EPOXYPROPYL, PYRROLIDINONE WITH ACRYLONITRILE,
METHYL METHACRYLATE, OR STYRENE -U-
AUTHOR--(03)-MUKHITDINOVA, N.A., STRATU, Z.A., MARKMAN, T.V.

COUNTRY OF INFO--USSR

SOURCE--UZB. KHIM. ZH. 1970, 14(2), 71-4

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--COPOLYMERIZATION, EPOXY COMPOUND, PYRROLIDINE, KETONE,
ACRYLONITRILE, STYRENE, METHYL METHACRYLATE, INTRINSIC VISCOSITY, IR
SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0921

STEP NO--UR/0291/70/014/002/0071/0074

CIRC ACCESSION NO--AP0137949

UNCLASSIFIED

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201920020-3

INSOL. IN H SUB2 O. COPOLYMERS OF I WITH IV WERE INSOL. IN H SUB2 O AND
CHCL SUB3. IR SPECTRA OF THE COPOLYMERS REVEALED THE FORMATION OF ETHER
GROUPS IN THE CHAIN AND THE DISAPPEARANCE OF THE EPOXY GROUPS.
FACILITY: INST. KHM., TASHKENT, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201920020-3"

USSR

GUBRIY, V. I., and MARKO, M. E.

"Nonlinear Problem of Cavity Flow Past a Lattice"

V sb. Materialy Vses. konferentsii po krayev. zadacham (Materials of Works), Kazan', Kazan' University, 1970, pp 87-93 (from RZh-Mekhanika, No 1, Jan 71, Abstract No 1B804 by V. P. Vakhomchik)

Translation: The article considers the discontinuous flow of an incompressible inviscid fluid with constant velocity at infinity $v = v_\infty$ past an aerodynamic lattice with stagger angle β . The origin of coordinates is situated at the critical point of one of airfoils, which with the x axis constitutes angle α . The lattice airfoils are thin plates behind which cavities of finite width form. The cavity closes onto two vortices, behind which extends a wake on whose boundary velocity $v = v_0$ is constant. In order to determine flow parameters in the physical flow plane (flow pressure p and velocity v), the range of Joukowski functions $u = \ln(v/v_\infty) - i\theta$ (θ is angle of velocity inclination in its hodograph plane) and of complex potential $w = \phi + i\psi$ are conformally mapped on upper auxiliary half-plane $\xi = \xi + i\eta$. An expression is obtained for complex potential w and function

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- 7 -

2/2 033
CIRC ACCESSION NO. A615797
ABSTRACT/EXTRACT--(U) GP-0-

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APPROVED FOR RELEASE: 09/01/2001

PROCESSING DATE--04DEC70
CIA-RDP86-00513R002201920020-3"

ABSTRACT. ANIONIC POLYHN. DF

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USSR

GUBRIY, V. I., and MARKO, M. E., Materialy Vses. konferentsii po krayev zadacham (Materials of Works), Kazan', Kazan' University, 1970, pp 87-93 (from RZh-Mekhanika, No 1, Jan 71, Abstract No 1B804 by V. P. Vakhomchik)

ω through parametric variable ξ in the form of finite analytic formulas. Unknown mapping constants are found from initial and boundary conditions. The magnitude of flow pressure on the plate in quadratures is found. The authors calculate the magnitude of normal flow pressure on the lattice plate (pressure coefficient) for a stagger angle value $\beta = 90^\circ$ as a function of various values of relative lattice spacing, plate inclination angles $\alpha = 5^\circ \div 30^\circ$ and cavity dimensions. The results of calculation are presented in the form of tables. The authors give no analysis of the results of calculation.

2/2

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE ENZYMATIC EXCRETORY FUNCTION OF THE SMALL INTESTINE IN PERSONS
WITH SUSTAINED COLECTOMY --U-
AUTHOR--(03)--BRUSILOVSKIY, M.I., KONSISTORUM, A.V., MARKO, O.P.
CCOUNTRY OF INFO--USSR
SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 6, PP 95-99
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ENZYME, SECRETION, SMALL INTESTINE, PHOSPHATASE, SURGERY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1781 STEP NO--UR/0497/70/048/006/0095/0099
CIRC ACCESSION NO--AP0129149

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 019

CIRC ACCESSION NO--AP0129149

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE CONTAINS DATA CONCERNED WITH THE CONTENT OF ENTEROKINASE AND ALKALINE PHOSPHATASE IN THE DUODENAL JUICE AND FECES IN 35 PERSONS WHO HAVE SUSTAINED COLECTOMY IN THE PAST. THE AUTHORS DEMONSTRATE THE RELATION BETWEEN THE CONTENT OF ENZYMES IN THE REFERRED TO MEDIA ON THE ONE HAND, AND THE QUANTITY AND QUALITY OF THE INTESTINAL MICROFLORA AND MOTILITY OF THE SMALL INTESTINE, ON THE OTHER HAND. IT IS SHOWN THAT IN PATIENTS WHO HAVE SUSTAINED COLECTOMY THE FORMATION OF ALKALINE PHOSPHATASE AND ENTEROKINASE IN THE SMALL INTESTINE DECREASES, AND THERE OCCURS AN AUGMENTED EXCRETION IN MOST OF THEM OF ENTEROKINASE WITH THE FECES AND IN SOME, OF ALKALINE PHOSPHATASE. FACILITY:

NAUCHNO-ISSLEDOVATELSKAYA LABORATORIYA PROKTOLOGII MZ RSFSR, MOSKVA.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--CHANGES IN THE MICROBIAL COMPOSITION OF FECES, CONTENTS OF
DIFFERENT PORTIONS OF THE LARGE INTESTINE AND THE TERMINAL PART OF THE
AUTHOR--(02)--LEVITAN, M.KH., MARKO, D.P.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 5, PP 40-42

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIGESTIVE SYSTEM DISEASE, LARGE INTESTINE, LESION,
MICROBIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0001

STEP NO--UR/0504/70/042/005/0040/0042

CIRC ACCESSION NO--AP0120701

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120701

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DURING BACTERIOLOGICAL STUDY OF FECES, CONTENTS OF DIFFERENT PORTIONS OF THE LARGE INTESTINE AND THE TERMINAL PART OF THE ILLIUM THE DATA TESTIFYING TO THE DEVELOPMENT OF DYSBACTERIOSIS PHENOMENA WERE OBTAINED IN 88 INVESTIGATIONS OF PATIENTS WITH NONSPECIFIC ULCEROUS COLITIS. THE DEPTH OF BACTERIAL SHIFTS DIRECTLY DEPENDED UPON THE SEVERITY OF THE CLINICAL COURSE OF THE DISEASE AND SPREAD OF THE PATHOLOGICAL PROCESS IN THE INTESTINE. THE ALTERED MICROFLORA OF THE LARGE INTESTINE AND APPEARANCE OF MICROORGANISMS IN THE PORTIONS WHERE THEY ARE ENCOUNTERED IN HEALTHY INDIVIDUALS UNDOUBTEDLY SERVE AS A FACTOR PREVENTING THE REGENERATIVE PROCESS IN THE INTESTINE IN PATIENTS WITH ULCEROUS COLITIS.
FACILITY: N-I LABORATORIYA PO PROKTOLOGII I KLINIKA MINISTERSTVA ZDRAVOOKHRANENIYA RSFSR, MOSCOW.

UNCLASSIFIED

USSR

UDC: 620.171

Sobolev, N. D., Morozov, Ye. M., Markochev, V. M., Gol'tsev, V. Yu., Sapunov, V. T.,
Bobrinskiy, A. P., Moscow

"Experimental and Theoretical Study of the Rupture of Sheet Materials with Cracks"

Kiev, Problemy Prochnosti, No 7, 1972, pp 45-49.

Abstract: Methods are presented for producing rupture diagrams during tensile testing of flat specimens with an initial crack. The results of testing of specimens of sheet material of various thicknesses of aluminum and titanium alloys, as well as certain steels, are studied.

1/1

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USSR

UDC 621.792:659.562

MARKON, I. O., SHEVCHENKO, A. F., Engineers, Ukrainian Planning, Technological and Experimental Institute for the Organization of the Machine Tool and Tool Industry

"Raising the Impact Resistance of Steel-Hard Alloy Glued Joints"

Kiev, Tekhnologiya i organizatsiya proizvodstva, No. 1, Jan/Feb 72, pp 20-21

Abstract: A nonstandard method for dynamic testing of a glued steel-hard alloy joint that was developed at the Institute with which the authors are affiliated is described. Results of the construction of samples of steel-20 with a glued plate of VK-8 hard alloy showed a spread of $\pm 35\%$ in the value of the impact viscosity. The magnitude of the spread depends not only on the thickness of the glued seam but also on the nature of the distribution of the glue film on the glued surfaces. After breakdown the glue film remains preferentially on the steel surface. The spread of the indices reduce to $\pm 20\%$ with a more uniform coating of the hard alloy with the glue film. The authors note that the absence of a glue film on the surface of the hard alloy shows the stronger adhesive bond of the glue with the steel

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USSR

MARKON, L. O., SHEVCHENKO, A. F., Tekhnologiya i organizatsiya proizvodstva, No. 1, Jan/Feb 72, pp 20-21

surface. Balancing of the adhesive forces is achieved by a combination of two glues, each of which has good adhesive properties with the corresponding materials and with one another. In addition, the application of a combination of a more elastic glue and a rigid, so-called two-stage method of gluing, raises the dynamic strength. GEN-150V glue was used as a sublayer. Gluing of the samples was carried out in the following manner: GEN-150V glue was applied to elements of the hard alloy prepared for gluing. The samples were placed in a thermostat and the glue sublayer was hardened for 2 hours at $145 \pm 1^\circ\text{C}$. The basic glue was then applied and the hard alloy was glued to the steel. Polymerization of the basic glue was carried out for 6 hours at 170°C at a pressure of 4 kg/cm^2 . Dynamic tests established that the application of the sublayer raises the strength of a glued joint by a factor of 1.5-2. Samples subjected to destructive testing had a more uniform distribution of the glue film over the connected surfaces. The spread in the magnitude and the shock viscosity did not exceed $\pm 15\%$.

2/2

1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--COMPOSITION FOR PREPARING INVESTMENT CASTING PATTERNS -U-

AUTHOR-(03)-MARKON, L.O., SHEVCHENKO, A.F., PETRENKO, V.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,816
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL PATENT, CHEMICAL COMPOSITION, WAX, METAL CASTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/0845

STEP NO--UR/04B2/TQ/000/000/0000/0000

CIRC ACCESSION NO--AA0131438

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0131438

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE TITLE COMPO. HAS THE FOLLOWING
PERCENT COMPN.: MONTAN WAX 9-11, ROSIN 9-11, POLYETHYLENE WAX 19-21,
AND PARAFFIN THE REMAINDER. FACILITY: UKRORGSTANKINPROH
UKRAINIAN STATE DESIGN TECHNOLOGICAL AND EXPERIMENTAL INSTITUTE.

UNCLASSIFIED

MARKOSYAN, A. A.

PRESSING PROBLEMS IN AGE-RELATED PHYSIOLOGY AND MEANS OF FUTURE DEVELOPMENT THEREOF

Article by A. A. Markosyan (Moscow). Meditsina i biologia (Moscow) 1972, No 4, 1972, pp. 2-49.

The last two decades have been a period of rapid growth of investigations on age-related physiology. Sufficient to indicate that today age-related problems are being developed in 207 scientific research institutions and 102 of the Soviet Union (versus 19 institutions in 1953).

During this same period, the Institute of Age-Related Physiology was founded at the USSR APS [Academy of Pedagogic Sciences]. There has been great development of investigations dealing with physiology of the elderly and aged, especially at the Institute of Gerontology USSR APO [Academy of Medical Sciences] founded during this same period.

Starting in the 1970/71 school year, for the first time in the history of higher education, lectures on age-related physiology were begun at all faculties of pedagogic institutes.

It is to be assumed that the time is quite ripe for introduction of an independent course on age-related physiology on the pediatric and sanitation and hygiene faculties of medical institutes.

This rapid growth of age-related physiology and morphology is attributable to the increased interest in age-related issues on the part of medicine, pedagogy, and biology. This interest was prompted by society and is referable to at least three problems.

Fulfillment of the grand objective of raising comprehensively developed, educated, and communistically reared people makes it necessary to pursue comprehensive investigation of man, in which age-related physiology occupies a prominent place.

Implementation of the prophylactic trend in Soviet medicine has made it necessary for workers in this field to pay special attention to the developing

1/2 018 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CHARACTERISTICS OF THE RIBOSE CONTAINING COMPONENT OF DNA
PREPARATIONS ISOLATED FROM RAT LIVER MITOCHONDRIA -U-
AUTHOR--(OS)-GAYTSKHOKI, V.S., GACHAVA, M.M., KAZAKOVA, T.B., MARKOSYAN,
K.A., RAKHIMBEKOVA, L.S.
COUNTRY OF INFO--USSR

SOURCE--BIOKHIMIYA 1970, 35(2), 336-42

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MITOCHONDRIUM, LIVER, TISSUE PHYSIOLOGY, DNA, CHROMATOGRAPHY,
PHYSICAL CHEMISTRY PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PRJXJ REEL/FRAE--3007/0282

STEP NO--UR/0218/70/034/002/0336/0342

CIRC ACCESSION NO--AP0135778

UNCLASSIFIED

OF RNA RESISTANT TO RNASE. TREATMENT OF DNA FOLLOWED BY POLYNUCLEOTIDE, PHOSPHORYLASE AND HEAT DENATURATION OF DNA. DURING DNA RNASE I TREATMENT DID NOT COMPLETELY REMOVE THE BOUND RNA. DURING DNA CHROMATOGRAPHY ON METHYLATED ALBUMIN KIESELGUHR COLUMNS PART OF THE RNA IS ELUTED AS A SEP. PEAK, AND THE REMAINDER IS ELUTED WITH THE DNA AND SHOWS SENSITIVITY TO RNASE. DNA IS COMPLETELY REMOVED FROM THE RNA BY CENTRIFUGING THE CHROMATOGRAPHED DNA PREPNS. IN A 0. GRADIENT OR BY GEL FILTRATION ON SEPHADEX G 200 FOLLOWING TREATMENT WITH RNASE AND PRONASE.

THIS RNA, PARTICULARLY THE LOOSELY BOUND FRACTION SEPD. FROM THE DNA DURING CHROMATOGRAPHY, POSSESSES TEMPLATE ACTIVITY WHICH SIGNIFICANTLY EXCEEDS THAT OF EQUIV. QUANTS. OF THE TOTAL MITOCHONDRIAL RNA.

FACILITY: LAB. BIOCHEM. GENET., INST. EXPTL. MED., Leningrad, USSR.

UNCLASSIFIED

USSR

UDC 613.74(-214)

LITVINOV, N. N. and MARKOSYAN, T. M., Institute of General and Communal Hygiene
imeni A. N. Sysin, Academy of Medical Sciences USSR, Moscow

"Hygienic Aspects Relating to the Organization of Mass Out-of-Town Recreation
for the Population of Large Cities"

Moscow, Gigiyena i Sanitariya, No 12, 1972, pp 42-45

Abstract: In recognition of the importance of rest and recreation for urban workers, the government has built numerous sanatoria, rest homes, tourist facilities, camps, etc. However, comparatively little planning has been done with regard to their distribution, access, avoidance of crowding, relation to one another, and provision of water, heat, sewage, and arrangements for garbage removal. Not much attention has been paid to individual needs and desires, to the differences between the requirements for active and passive rest and for weekend outings versus long vacations. Other matters calling for thorough study include travel to recreation areas and the problem of "transport fatigue," the needs of people living in different climatic zones at different times of the year and in cities of different sizes, and setting of hygienic standards for recreational facilities in terms of their capacity and ground area required.

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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002201920020-3"

2/2 018

UNCLASSIFIED

CIRC ACCESSION NO--AP0135778

ABSTRACT. DNA PREPNS. FROM RAT LIVER
CONTAINED A CONSIDERABLE QUANT.

USSR

UDC 77

YABLONKA, S., MARKOTSKIY, V.

"Application of a Hydrocyclone to Increase the Concentration of a Photoemulsion"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970. Priroda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970. Nature of Photosensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 325-328 (From RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1298)

Translation: A study of the possibilities of hydrocyclone equipment to concentrate the solid phase of photographic emulsions is continued (for beginning see RZhFiz, 1969, 8D1000). The effect of the parameters of the initial emulsion, conditions of input to the device, and the structural parameters of the latter on the degree of concentration of the solid phase obtained and the effectiveness of the concentration is investigated. The results obtained in a series of model emulsions were tested under industrial conditions in a two-stage quadruple concentration of a coarse-grained x-ray emulsion, and it was shown that the fine-grained fraction goes into the overflow. A. L. Kartuzhanskiy.

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USSR

UDC 51:621.391

ALEKSEYEV, V. YE., and MARKOV, AL. A.

"Combinatorial Algebra Problems in Coding Theory"

V sb. Izbr. tr. Vses. mezhvuz. simpoz. po prikl. mat. i kibernet., Gor'kiy, 1967 (Selected Works of the All-Union Inter-VUZ /Higher Educational Institution/ Symposium on Applied Mathematics and Cybernetics, Gor'kiy, 1967 -- Collection of Works), Moscow, "Nauka," 1973, pp 283-285 (from RZh-Matematika, No 6, Jun 73, Abstract No 6V467 from authors' summary)

Translation: The article considers three problems in information theory which involve the formulation of problems of a combinatorial algebra character. The first of them reduces to a characterization of the construction of generating sets of free semigroups, the second consists in studying cyclic decompositions of Steiner triple systems, the third represents an interesting problem in partition theory. A review is given of results obtained by the authors on these questions, as well as results known from the literature, and unsolved problems in each of these areas are formulated.

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USSR

ALEKSEYEV, V. Ye., MARKOV, Al. A.

"Combinatorial-Algebraic Problems of Coding Theory"

Izbr. Tr. Vses. Mezhvuz. Simpoz. po Prikl. Mat. i Kibernet., Gor'kiy, 1967
[Selected Works of All-Union Interuniversity Symposium on Applied Mathematics and Cybernetics, Gor'kiy, 1967], Moscow, Nauka Press, 1973, pp 283-285
(Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V467, by the authors).

Translation: Three problems from information theory are studied, leading to a statement of problems of combinatorial-algebraic nature. The first is reduced to the characteristics of construction of generating sets of free semigroups, while the second consists in studies of cyclical expansions of systems of Steiner triads, and the third is an interesting problem from the theory of subdivisions. A review is presented of results on these problems, both produced by the authors and known from the literature, and unsolved problems in each of these areas are formulated.

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USSR

UDC: 51:621.391

MARKOV, Al. A.

"On a Class of Complete Biprefix Codes With Finite Average Length of a Code Word"

V sb. Diskretn. analiz (Discrete Analysis---collection of works), vyp. 18, Novosibirsk, 1971, pp 41-48 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V410)

Translation: Biprefix codes with finite average length of a code word are considered. A code is called biprefix if the code itself and its inversion are both prefix codes. Complete biprefix codes (i. e. those which cannot be proper subsets of other biprefix codes) play an important part in the study of the synchronization properties of prefix codes, and are of interest in their own right as well. Let $t(K)$ be the average length of a code word of code K , and N_i be the class of all biprefix codes with $t(K) = i$. In this paper, the operation $\psi_n(M)$ of n -th order increment for the set M is defined for every integral n . Roughly speaking $\psi_n(M)$ is the set of words which together with M makes the average word length in the set $M \cup \psi_n(M)$ equal to n . The principal result of the work states that for every $i > 1$, each code K of

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USSR

UDC: 51:621.391

MARKOV, Al. A., NOSKOV, V. V.

"On the Construction and Some Properties of Fixed-Weight Binary Codes Without Overlaps"

V st. Diskretn. analiz (Discrete Analysis--collection of works), vyp. 18, Novosibirsk, 1971, pp 49-65 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V411)

Translation: In the paper by V. N. Levenshteyn (RZhMat, 1965, 9V150), so-called codes without overlaps were introduced into the discussion. A characteristic property of these codes consists in the fact that the intersection of the set of all inherent prefixes of code combinations with the set of all their inherent suffixes is the null set. This property ensures localization of the effect of the synchronization error within the limits of a single code combination.

In this paper, the authors consider fixed-weight binary codes without overlap. A method of constructing codes without overlaps of length dn and constant weight $d \cdot w$ designated by $K_{n,w}^d$ is described for an arbitrary inte-

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USSR

UDC 51.621.391

MARKOV, A. I. A.

"Non-recurrent Codes with Minimum Decoding Complexity"

Probl. Kibernetiki [Problems of Cybernetics -- Collection of Works], No. 23, Moscow, Nauka Press, 1970, pp 287-290 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V451).

Translation: Non-prefix complete systems of words are studied and the structure of such systems having minimum complexity is determined.

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USSR

UDC 51.01.16

MARKOV, AL. A.

"Combinatory Lemma and Structure of a Class of Binary Codes"

Moscow, Matematicheskiye Zametki (Mathematical Articles -- Collection of Works),
March, 1970, pp 325-332

Abstract: The author defines the class of complete binary code systems in which one symbol of the alphabet is used no more than once in any code combination in terms of the prefix codes of the same class and the operations of inversion and substitution of codes. The class D of binary code systems of variable length is investigated. Complete binary code systems D are considered to include systems in which one of the symbols of the alphabet $[0, 1]$ let us say 1 is used in a code combination no more than once. The purpose of the paper consists in exhaustive definition of the class D. The result is in favor of the known proposition of the capability of describing the class of complete code systems in terms of prefix codes and the operation of inversion and superposition of the codes. The proof is based on a lemma which is of independent interest: For each factorization $N = A + B(p)$ there is a series M such that $\rho = \rho_M$ where $M = \{n_i\}_{i=0}^{\infty}$ is a finite or infinite series of natural numbers, $n_0 = 1$, $n_i \geq 1$ ($i = 1, 2, \dots$).

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USSR

MARKOV, AL. A., Matematicheskiye Zametki, March, 1970, pp 325-332

The result following from the lemma is formulated as follows: D is the closure of the class $\{\pi_k \cup 0^k\}_{k=1}^{\infty}$ with respect to the operations of inversion and substitution.

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USSR

UDC 621.383.8

BUTSLOV, M. M., Doctor of Sciences, GORNOSTAYEV, V. A., KARAPETYAN, B. O.,
MARKOV, A. A., Doctor of Sciences, SMOLKIN, G. Ye., Doctor of Sciences, and
SOFIYEV, G. N., Candidate of Sciences

"Electron-Optical Pulse Apparatus for Astronomical Investigations"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 10, Oct 72, pp 54-56

Abstract: A study is made of the problems to develop an installation for the investigation of astronomical objects with transitional radiation on the basis of pulsed cascade image converter tubes. This installation must be applicable for the solution of a large circle of astronomical problems requiring short-term exposures. The demands made to the principal parameters of a similar installation are indicated. The installation and the generator of frame scanings (GFS) and shutter pulses are described by reference to the flow chart and the functional diagram. The results of testing the GFS by making use of a PIM-3 type converter are presented in form of frequency-contrast characteristics. The latter give an idea of the contrast transfer in the whole range of frequencies. Four illustr., six biblio. refs.

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USSR

UDC: 681.332.65

MARKOV, A. I., NETKACH, A. Ya., SHULAYEV, V. F., Kazan' University

"A Pulse Shaper"

USSR Author's Certificate No 296043, filed 8 Dec 69, published 5 Apr 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B219 P)

Translation: The invention applies to the field of information-measurement and computer technology. The advantages of the proposed device are most fully realized in instruments designed for operations under field conditions with power supply from portable truck-mounted generators. Similar devices are known for shaping control pulses for a dekatron which are based on vacuum-tube, semiconductor, and gas-discharge devices. The analogs described in many instances are not very economical, require high-voltage power supplies, or are exceptionally slow. The proposed device is capable of operation at a supply voltage of 10-12 V, providing high speed (up to 100 kHz when operated with an OG-8 dekatron) and adequate economy. One illustration.

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USSR

AGEYEV, N. V., Academician, PETROVA, L. A., GRANKOVA, L. P., ~~MAPKOV, A. M.~~,
Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences of the USSR,
Moscow

"A Titanium-Based Composite Material"

Moscow, Doklady Akademii Nauk SSSR, Vol 210, No 4, 1 Jun 73, pp 811-814

Abstract: The paper describes a composite laminar material based on titanium made by hot-rolling in a vacuum. Five-layer and three-layer composites are studied to determine the force and temperature parameters and the feasibility of making a strong joint between layers. The plastic component for the five-layered composite was VT1 α -titanium foil 0.1 mm thick. It was assumed that a sheet built up from n layers of such foil would have greater resistance to brittle fracture than a monolithic sheet of titanium of the same thickness. The foil was etched in dilute hydrofluoric acid and washed in hot water with hydrogen peroxide added before rolling the sheet. A sheet 0.6 mm thick was then rolled from nine layers of foil, and two such sheets were rolled together to make a sheet about 1 mm thick, which was used in the composite. The strength material for

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USSR

AGEYEV, N. V. et al., Doklady Akademii Nauk SSSR, Vol 210, No 4, 1 Jun 73, pp 811-814

the composite was IVT1 alloy (Ti-7Mo-5.5Cr-3Fe-3Al) in 0.65 mm cold-rolled sheets. The two outside plates and the central plate were IVT1 alloy with alternating layers of titanium foil. After assembly of the stack, the edges were welded and rolling was done to 35% reduction at 1100°C. The resultant 2.7 mm plate was then cold-rolled to 2.3 mm. The plate was cut in the direction of rolling into specimens which were heat treated and studied for structure, microhardness of the layers and diffusion redistribution of the alloying elements between layers. The three-layer sandwich plates were made with α -titanium in the outer layers and an alloy similar to IVT1 in the center. The results of tests show that specimens made up of n layers of the same material are stronger than a monolithic plate of the same thickness. Greater strength can also be achieved by increasing the number of layers in a composite material.

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1/2 054 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--DEFORMATION AND MECHANICAL PROPERTIES OF COMPOSITES BASED ON NICKEL
AND TITANIUM REINFORCED WITH TUNGSTEN WIRE -U-
AUTHOR--KOPETSKIY, CH.V., MARKOV, A.M., ORZHEKHOVSKIY, V.L.
COUNTRY OF INFO--USSR M
SOURCE--FIZ. KHM. OBRAB. MATER. 1970, (1) 70-8
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--MECHANICAL PROPERTY, COMPOSITE MATERIAL, NICKEL ALLOY,
TITANIUM ALLOY, TUNGSTEN ALLOY, WIRE, METAL DEFORMATION, MATERIAL
FRACTURE, REINFORCED MATERIAL, FIBER METALLURGY, METAL FIBER/(U)UT31
TITANIUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0633

STEP NO--UR/0472/70/000/001/0070/0078

CIRC ACCESSION NO--AP0105612

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 054

CIRC ACCESSION NO--AP0105612
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TENSILE STRENGTH, THE DEFORMATION, AND THE FRACTURE CHARACTERISTICS OF UNIDIRECTIONAL NI OR TI ALLOY (VTZ-1) COMPOSITES REINFORCED WITH W WIRE WERE INVESTIGATED AS A FUNCTION OF TEMP. (20DEGREES TO 800DEGREES IN 200DEGREES STEPS) AND FIBER CONTENT (0-45 VOL. PERCENT) AND COMPARED WITH THOSE OF THE COMPONENTS. THE TENSILE STRENGTH OBEYED THE RULE OF MIXTS. IS GREATER THAN 200DEGREES FOR W-NI AND IS GREATER THAN 600DEGREES FOR THE W-TI ALLOY COMPOSITES; IN THE LATTER NO REINFORCEMENT OCCURRED UNTIL 600DEGREES. THE FAILURE STRAIN INCREASED RAPIDLY WITH DECREASING FIBER CONTENT AND SHOWED A MAX. AT 200DEGREES FOR THE W-NI AND AT 600DEGREES FOR THE W-TI ALLOY, AT WHICH POINT THE W WIRE DEFORMED UNIFORMLY. AT IS GREATER THAN OR EQUAL TO 400DEGREES FOR W-NI AND IS GREATER THAN OR EQUAL TO 800DEGREES FOR W-TI ALLOY, RESP., MULTIPLE NECKING OF THE W REINFORCEMENT WAS OBSD. PRESENCE OF A 10-15 MU INTERMEDIARY LAYER OF WNI SUB4 DECREASED THE STRENGTH TO APPROX. ONE HALF, IF THE COMPOSITE WAS BELOW THE BRITTLE DUCTILE TRANSITION TEMP., T SUBG, OF THE W, BUT HAD NO EFFECT AT TEMP. IS GREATER THAN T SUBG. THE FAILURE CHARACTERISTICS OF THE COMPOSITE AND THE COMPONENTS AT VARIOUS TEMPS. AND FIBER CONTENTS ARE DISCUSSED IN DETAIL.

UNCLASSIFIED

USSR

UDC 669.71

KOPETSKIY, CH. V., ~~MARKOV, A. M.~~, ORZHEKHOVSKIY, V. L., Moscow

"Deformation and Mechanical Properties of Ni- and Ti-Based Compositions Reinforced with Tungsten Wire"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, 1970, pp 70-78

Abstract: An experimental study is made of the effect of tungsten wire reinforcement, in various volumetric proportions, on the mechanical properties (deformation, hardening, rupture) of nickel- and tungsten-based compositions. Temperature effects are studied. Tables, graphs, and photographs accompany the article.

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USSR

UDC 539.434.621.785.53:669.15-194.2

KRISHTAL, M. A., PONOMARENKO, YE. P., BELOV, YU. K. and MARKOV, A. P. (Tula Polytechnic Institute Ukrainian Scientific Research Institute of Special Steels, Alloys and Ferroalloys)

"Heat Resistance and Strength of Chromium-Plated Carbon Steels"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 6, 1970, pp 60-61

Abstract: A study was made of the possibility of using carbon sheet steel (obtained by contactless vacuum diffusion) under high-temperature (up to 1200°C) conditions. The steel (St 3) has a surface-alloyed chromium (40-60%) layer 1.5-2.2 mm thick. The tests were conducted on samples and industrial equipment operating under variable thermal cycle conditions. St 3 and Kh18Ni9Ti steel were compared. The strength properties of St 3 containers at temperatures up to 1200°C were found to be 2-4 times higher than those of Kh18Ni9Ti steel. St 3 steel is recommended for use in equipment operating under load at high temperatures. 2 figures, 5 references.

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USSR

UDC 539.3:534.1

KUSHCHEV, B. I., MARKOV, A. S.

"Stand for Studying Forced Oscillations of Smooth Cylindrical Shells"

Tr. Voronezh. tekhnol. in-ta (Works of Voronezh Engineering Institute),
1972, Vol. 19, No. 1, pp 65-70 (from RZh-Mekhanika, No 3, Mar 73,
Abstract No 3V214)

Translation: The construction and operating principle of an electromechanical system are discussed. The system makes it possible to separate and maintain by a field of direct forces the individual shapes of oscillations over a wide frequency range. Analysis of the steady-state motion of the shell for harmonic perturbation is made on the basis of the amplitude-frequency, phase-frequency, admittance and other characteristics obtained from the action of concentrated forces. Authors' abstract.

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1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--REFLECTION OF THE STRUCTURAL SIMILARITY OF SALTS IN THE MOLAR
VOLUME OF FUSED SALT MIXTURES -U-
AUTHOR--(03)-MARKOV, B.F., PRISYAZHNYI, V.D., PRIKHODKO, G.P.
COUNTRY OF INFO--USSR *M*
SOURCE--UKR. KHIM. ZH. 1970, 36(3), 251-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--INORGANIC SALT, MULTICOMPONENT CHEMICAL MIXTURE, THERMAL
EFFECT, MANGANESE CHLORIDE, CALCIUM CHLORIDE, CESIUM CHLORIDE, LITHIUM
CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0361 STEP NO--UR/0073/70/036/003/0251/0253
CIRC ACCESSION NO--AP0137465
UNCLASSIFIED

EXCESS MOL. VOL. VS. COMPN. FOR THESE MIXTS. AND THE ANALOGOUS ONES
CONTG. MGCL SUB2 (IN PLACE OF MNCL SUB2). THE SHAPES OF THE GRAPHS FOR
THE MNCL SUB2 AND MGCL SUB2 MIXTS. ARE VERY SIMILAR. THE LCL MIXTS.
DO NOT DEVIATE FROM ADDITIVITY. WITH CACL SUB2, THE EXCESS MOL. VOL. IS
NEG. AT ALL CONCNS. THIS IS ATTRIBUTED TO DESTRUCTION OF BULKY
POLYMERIC FORMS OF MNCL SUB2 AND MGCL SUB2. WITH CSCL, NEG. VALUES ARE
ONLY OBTAINED AT CONCNS. SMALLER THAN 0.2 MOLE FRACTION CSCL. THERE IS
A POS. MAX. IN EXCESS MOL. VOL. AT SIMILAR TO 0.4 MOLE FRACTION CSCL.
FACILITY: INST. OBSHCH. NEORG. KHIM., KIEV, USSR.

UNCLASSIFIED

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002201920020-3

2/2 014
CIRC ACCESSION NO--AP0137465
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT. TABLES OF A AND B IN D SUBT EQUALS
PAGE 1 OF 1

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002201920020-3"

USSR

UDC: 541.13

M
MARKOV, B.F., and PODAFA, B.P., Institute of General and Inorganic Chemistry
imeni N.S. Kurnakov, Moscow, Academy of Sciences USSR

"Equilibrium Between Metallic Titanium and its Chlorides in a Medium
of Molten Cesium Chloride"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 36, No 1, Jan 70, pp 20-22

Abstract: Equilibrium potentials of titanium and redox potentials of the system Ti^{2+}/Ti^{3+} were determined in a medium of molten cesium chloride at 700°. The apparent standard potential of the system titanium-titanium dichloride was found to be -1.981 ± 0.004 v relative to chlorine reference electrode. The formal redox potential $E^0_{Ti^{2+}/Ti^{3+}}$ was -1.997 ± 0.009 v relative to the reference electrode. Analysis of experimental data led the authors to a conclusion that the equilibrium of the reaction $2TiCl_3$ (molten) + Ti (solid) $\rightleftharpoons 3TiCl_2$ in a medium of molten alkalimetal chlorides shifts towards the trichloride as one goes from sodium to potassium to cesium, which is due to a stronger complex formation trend of the trichloride.

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1/2 021 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--EQUILIBRIUM BETWEEN METALLIC TITANIUM AND ITS CHLORIDES IN A MEDIUM
OF MOLTEN CESIUM CHLORIDE -U-
AUTHOR--MARKOV, B.F., PODAFA, B.P. M
COUNTRY OF INFO--USSR
SOURCE--UKR. KHIM. ZH. 1970, 36(1) 20-2
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--CORUNDUM, SILVER CHLORIDE, TITANIUM CHLORIDE, POTASSIUM
CHLORIDE, SODIUM CHLORIDE, METAL ELECTRODE, CHEMICAL EQUILIBRIUM,
TITANIUM, CESIUM CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1324 STEP NO--UR/0073/70/036/001/0020/0022
CIPC ACCESSION NO--AP0107797
ZZZZZZZZZZ UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

1/2 021
TITLE--EQUILIBRIUM BETWEEN METALLIC TITANIUM AND ITS CHLORIDES IN A MEDIUM
OF MOLTEN CESIUM CHLORIDE -U-
AUTHOR--MARKOV, B.F., PODAFA, B.P.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(1) 20-2

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CORUNDUM, SILVER CHLORIDE, TITANIUM CHLORIDE, POTASSIUM
CHLORIDE, SODIUM CHLORIDE, METAL ELECTRODE, CHEMICAL EQUILIBRIUM,
TITANIUM, CESIUM CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1324

STEP NO--UR/0073/70/036/001/0020/0022

CIRC ACCESSION NO--AP0107797
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UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 021
CIRC ACCESSION NO--AP0107797

ABSTRACT--(U) GP-O- ABSTRACT. THE CELL (MINUS) YI TICL SUB2-TICL
SUB3 MIXT. IN CSCL. CORUNDUM DIAPHRAGM PARALLEL TO AGCL IN
1:1 (MOLE) NACL-KCL MIXT. AGTI (PLUS) AT 700DEGREES IN THE ANODIC
THE COGN. OF TICL SUB2 DETD. FROM THE AMT. OF CURRENT USED IN THE ANODIC
DISSOLN. OF THE TI ELECTRODE. MEASUREMENTS OF P.D. AT VARIOUS TI PRIME2
POSITIVE CONCNS. AGREED WITH THE NERNST RELATION, STANDARD POTENTIAL
EQUALS 1.981 PLUS OR MINUS 0.004 V RELATIVE TO A CL REF. ELECTRODE.
FOR THE CELL (MINUS)MO-TICL SUB2-TICL SUB3 MIXT. IN CSCL PARALLEL TO
CORUNDUM DIAPHRAGM PARALLEL TO AGCL IN 1:1 (MOLE) NACL-KCL MIXT.- AG-MO
(POSITIVE). EMG. MEASUREMENTS WERE USED TO OBTAIN A HALF CELL POTENTIAL
OF MINUS 1.997 PLUS OR MINUS 0.009 FOR TI PRIME2 POSITIVE-TI PRIME3
POSITIVE AT 700DEGREES IN CSCL. COMPARISON WITH THE RESULTS IN NACL AND
KCL SOLN. INDICATES A LARGER CONCN. OF TICL SUB3 IN CSCL. THIS IS
ATTRIBUTED TO THE GREATER STABILITY OF TICL SUB6 PRIME3 NEGATIVE OVER
THAT OF TICL SUB4 PRIME2 NEGATIVE.

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PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107797

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CELL (MINUS) TI TICI SUB2-TICI SUB3 MIXT. IN CSCL PARALLEL TO CORUNDUM DIAPHRAGM PARALLEL TO AGCL IN 1:1 (MOLE) NaCl-KCl MIXT. AGTI (PLUS) AT 700DEGREES WAS CONSTRUCTED AND THE CONC. OF TICI SUB2 DETD. FROM THE AMT. OF CURRENT USED IN THE ANODIC DISSOLN. OF THE TI ELECTRODE. MEASUREMENTS OF P.D. AT VARIOUS TI PRIME2 POSITIVE CONCNS. AGREED WITH THE NERNST RELATION, STANDARD POTENTIAL EQUALS 1.981 PLUS OR MINUS 0.004 V RELATIVE TO A CL REF. ELECTRODE. FOR THE CELL (MINUS)MO-TICI SUB2-TICI SUB3 MIXT. IN CSCL PARALLEL TO CORUNDUM DIAPHRAGM PARALLEL TO AGCL IN 1:1 (MOLE) NaCl-KCl MIXT.- AG-MO (POSITIVE), EMG. MEASUREMENTS WERE USED TO OBTAIN A HALF CELL POTENTIAL OF MINUS 1.997 PLUS OR MINUS 0.009 FOR TI PRIME2 POSITIVE-TI PRIME3 POSITIVE AT 700DEGREES IN CSCL. COMPARISON WITH THE RESULTS IN NaCl AND KCl SOLN. INDICATES A LARGER CONC. OF TICI SUB3 IN CSCL. THIS IS ATTRIBUTED TO THE GREATER STABILITY OF TICI SUB6 PRIME3 NEGATIVE OVER THAT OF TICI SUB4 PRIME2 NEGATIVE.

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UNCLASSIFIED

MARKOV, B. G.

Soviet expert; is associated with Bayan Ologey Aymag Wool Washing
Factory

Source: Mongolian Newspaper Uneu, 10 March 1971, p1

USSR

GANGRSKIY, YU. P., MARKOV, B. N., KHARISOV, I. F., and TSIPENYUK, YU. M.,
Institute of Physical Problems, Academy of Sciences USSR, Joint Institute
for Nuclear Research

"Action of Spontaneously Fissionable Isomeric States of Pu^{239} and Am^{243}
During Inelastic Scattering of Gamma-Quanta"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 14,
No 6, 20 Sep 71, pp 370-372

Abstract: Investigating the activation mechanism of spontaneously fission-
able isomeric levels in various nuclear reactions is one of the basic means
of studying the nature of these states. The authors use two possible means
of activating the isomeric state: (1) the activation of levels lying
above the fission barrier (in the energy range of 6-10 MeV), and their dis-
charge using radiation transitions to the levels of the second holes for
the isomeric state; and (2) the activation of levels in the first hole below
the fission barrier (with an energy of 3-6 MeV) and subsequent tunnel transi-
tion to the second potential hole. The results of this article reveal the
possibility of studying the properties of spontaneously fissionable isomers
in reactions of inelastic scattering of gamma-quanta. By using a larger
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USSR

GANGRSKIY, YU. P., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 14, No 6, 20 Sep 71, pp 370-372

number of test data it is possible to utilize lower activation energies and thus more fully investigate the mechanism of populating the isomeric state and establish the structure of the fission barrier of the nuclei. The article contains 2 illustrations and 9 bibliographic entries.

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1/2 014
TITLE--SPARK COUNTER FOR FISSION FRAGMENTS -U- UNCLASSIFIED PROCESSING DATE--04DEC70
AUTHOR--(05)-GANGRSKIY, YU.P., DALKHSUREN, B., LAZAREV, YU.A., MARKOV,
B.N., NGUYEN, C.H.
COUNTRY OF INFO--USSR
SOURCE--PRIB. TEKH. EKSP. 1970, (2), 63-5
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--NUCLEAR FISSION, SPARK CHAMBER, NUCLEAR PHYSICS APPARATUS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3008/2016 STEP NO--UR/0120/70/000/002/0063/0065
CIRC ACCESSION NO--AP0138870
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138870

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE GIVEN OF MEASUREMENTS OF THE EFFICIENCY OF REGISTRATION FOR FISSION FRAGMENTS AND OF THE RESOLVING TIME FOR SEVERAL GAS MIXTS. BASED ON HE, NE, AR, KR, XE, AND N SUB2. FOR A SERIES OF GAS MIXTS., AN EFFICIENCY OF LESS THAN OR EQUAL TO 50PERCENT WAS OBTAINED FOR THE FRAGMENTS, AND FOR ALPHA PARTICLES, IT WAS LESS THAN 10 PRIME NEGATIVE 10PERCENT. FACILITY: OB'EDIN. INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--REACTIONS RESULTING IN THE PRODUCTION OF SPONTANEOUSLY FISSIONABLE
AMERICIUM ISOMERS -U-
AUTHOR--(03)--MARKOV, B.N., GANGRSKIY, YU.P., TSIPENYUK, YU.M. M
COUNTRY OF INFO--USSR
SOURCE--YAD. FIZ. 1970, 11(1), 54-8
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--PHOTONUCLEAR REACTION, AMERICIUM, NUCLEAR ISOMER, NUCLEAR
FISSION, EXCITATION ENERGY, FISSION PRODUCT, BREMSSTRAHLUNG, GAMMA
SPECTRUM, FISSION CROSS SECTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1976/0430 STEP NO--UR/0367/70/011/001/0054/0058
CIRC ACCESSION NO--AP0042466
UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--09OCT70
 CIRC ACCESSION NO--AP0042466
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRODUCTION OF SPONTANEOUSLY
 FISSIONABLE ISOMERS PRIME240 AM AND PRIME242 AM IN (GAMMA,N) REACTIONS
 ON PRIME241 AM AND PRIME243 AM IS INVESTIGATED. THE FISSION FRAGMENTS
 WERE DETECTED BY A SPARK COUNTER. THE INTEGRAL YIELDS OF BOTH THE
 ISOMERS WERE MEASURED, DEPENDENT ON THE END POINT ENERGY OF THE
 BREMSSTRAHLUNG GAMMA QUANTA. THRESHOLDS OF THE REACTIONS PRODUCING THE
 ISOMER STATES ARE DETD. AND EXCITATION ENERGIES FOR THE ISOMER LEVELS
 ARE CALCD. THE ISOMERIC RATIO FOR PRIME240 AM IS CALCD. FROM THE
 COMPARISON OF THE FRAGMENT YIELDS OF THE DELAYED AND INDUCED FISSION.
 SINCE A CONTINUOUS SPECTRUM OF GAMMA QUANTA IS FORMED IN THE
 BREMSSTRAHLUNG OF THE SOURCE E, THE OBSD. FRAGMENT YIELD (SPONTANEOUS
 AND DELAYED) CAN BE RELATED MATH. TO THE REACTION CROSS SECTION. THE
 PHOTONUCLEAR REACTIONS CAN BE USED TO INVESTIGATE THE PROPERTIES OF THE
 SPONTANEOUSLY FISSIONABLE ISOMERS. FACILITY: OB'EDIN, INST.
 YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

USSR

GANGRSKIY, Yu. P., et al., Yadernaya Fizika, Vol 11, No 1, 1970, pp 54-58

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USSR

UDC 616.832.004.2

MARKOV, D. A., Institute of Physiology, Belorussian Academy of Sciences

"Principles of Rehabilitation After Central Nervous System Diseases:
A Theoretical Discussion"

Minsk, Doklady Akademii nauk BSSR, No 10, 1973, pp 961-964

Abstract: The central nervous system has both rigid (specialized) and flexible connections. The latter can be used to stimulate compensatory adaptation. Multisensory convergence is found at all levels of the CNS. Thus, the potentialities for restoration of impaired CNS functions are increased if the plasticity of the cortex and wealth of associative connections are utilized to form new (indirect) conditioned reflexes and new closure functions. Organic, functional, and psychogenic correlations must be correctly evaluated. A priority task of rehabilitation while the patient is still in the hospital is to strengthen the "spontaneous" restorative and compensatory mechanisms, thereby preventing, decreasing, or eliminating hospitalism ("self-isolation," negative emotions). Restoration of impaired CNS functions should proceed through several stages: elimination
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USSR

MARKOV, D. A., Doklady Akademii nauk BSSR, No 10, 1973, pp 961-964

of temporary parabiologic inhibition, vicarious substitution, reorganization and compensation of the defect by using the "reserve capabilities" of the CNS, including the paired structures of the brain.

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USSR

LINKOVSKIY, ZH. B. and MARKOV, E. I.

"Change in Reliability and Mean Time Between Failures of Systems with Changing Intensity of Failures of Elements"

Statistika, Inform., Vychisl. Tekhn. [Information Statistics, Computer Technology -- Collection of Works], No 5, Moscow, 1973, pp 177-180
(Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V267)

Translation: A system of n elements with intensity of failures $\lambda_1, \dots, \lambda_n$ is studied. Suppose $P(t) = F(t; \lambda_1, \dots, \lambda_n)$ is the probability of failure-free operation of the system over time interval $[0, t]$, $T = f(\lambda_1, \dots, \lambda_n)$ is the mean time between failures. It is suggested that the following quantity be used as a measure of the sensitivity of these characteristics to changes in the intensity of failures:

$$\theta_i(P) = \frac{\partial \ln F}{\partial \lambda_i}, \quad \theta_i(\bar{T}) = -\frac{\partial \ln f}{\partial \lambda_i}, \quad 1 \leq i \leq n.$$

Examples are studied.

I. Kovalenko

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1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ACTION OF OROTIC ACID HYDRAZIDE ON THE GROWTH OF NEUROSPORA CRASSA
AND EHRLICH ASCITE TUMOR -U-
AUTHOR-(03)-GOLOGINSKIY, YE., EMANUILOV, E., MARKOV, G.G.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 293-295
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FUNGUS, MICROORGANISM, OROTIC ACID, AZIDE, ANTINEOPLASTIC
DRUG, ASPARTIC ACID, BIOSYNTHESIS, INHIBITION, TUMOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0146 STEP NO--UK/0301/70/016/003/0293/0295
CIRC ACCESSION NO--AP0120946
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--23OCT79

CIRC ACCESSION NO--AP0120846

ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. IT WAS SHOWN THAT THE OROTIC ACID HYDRAZIDE INHIBITS THE GROWTH OF NEUROSPORA CRASSA. THE INHIBITORY EFFECT OF OROTIC ACID HYDRAZIDE IS PARTIALLY REVERSED BY OROTIC ACID AND ALSO BY SOME PRECURSORS OF ITS BIOSYNTHESIS (ASPARTIC ACID AND UREIDOSUCCINIC ACID). THE INHIBITORY EFFECT COULD ALSO BE REVERSED IN A LESS DEGREE BY URACIL THYMINE AND CYTOSINE. THE EFFECT OF OROTIC ACID HYDRAZIDE ON THE GROWTH OF EHRlich ASCITE TUMOR OF MICE WAS INVESTIGATED. IT WAS SHOWN THAT THE OROTIC ACID HYDRAZIDE POSSESSES A SLIGHT ANTITUMOR ACTION IN DOSES NEARLY TO LETHAL. FACILITY: BIOCHEMICAL RESEARCH LABORATORY, BULGARIAN ACADEMY OF SCIENCES, SOFIA, BULAGRIA.

UNCLASSIFIED

USSR

UDC 615.916:546

MARKOV, G. I., NIKOLAYEV, G. M.

"Variation in Content of Ascorbic Acid in the Adrenal Glands of White Rats Under the Effect of Aluminum-Chromium Catalyst"

V sb. Toksikol. i giliyena produktov neftekhimii i neftekhim. proiz-v (Toxicology and Hygiene of the Products of Petrochemistry and Petrochemical Production--Collection of Works), Yaroslavl', 1 1972, pp 148-150 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.636)

Translation: In rats subjected to aluminum-chromium catalyst in a concentration of 0.00044 mg/liter (recalculated for chromium anhydride) for 30-90 days, a reduction in the vitamin C content in the cellular elements of the adrenal glands was detected. USSR, Yaroslavl', Medical Institute.

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Devices

USSR

UDC 621.387.292

SANIN, I.V., MARKOV, G.N., KRIVENKO, A.I.

"Single-Electron Regime Of FEU [Photomultiplier]--65"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronoluch. i fotoelektr. pribory
(Electronic Technology. Scientific-Technical Collection. Electron Beam and
Photoelectric Devices), 1970, Issue 3(17), pp 38-41 (From RZh--Elektronika i
yeve primeneniye, No 4, April 1971, Abstract No 44257)

Translation: A method is described for measurement of the distribution of the output pulses of a photomultiplier (FEU), and the results are presented of the measurement of the distribution of single-electron pulses of the FEU-65. The limits of the plateau of the counter characteristic curve are established as well as the possibility of use of the Pearson criterion for evaluation of the number of afterpulses of the FEU-65. Summary.

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